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\*\* Admitted in CT only

November 11, 2004

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Re: U.S. Patent Application No.: 10/607,287  
For: *MICROFLUIDIC SYSTEM INCLUDING A VIRTUAL WALL FLUID  
INTERFACE PORT FOR INTERFACING FLUIDS WITH THE  
MICROFLUIDIC SYSTEM*  
Inventors: Gilbert, John R., *et al.*  
Filed: June 25, 2003  
Our Ref. No.: TGZ-001ACP2

Dear Sir:

I enclose herewith for filing in the above-identified application the following:

1. Information Disclosure Statement;
2. PTO Form SB/08; and
3. A Return Postcard.

No additional costs are believed to be due in connection with the filing of this Information Disclosure Statement. However, please charge any necessary fees in connection with the enclosed statement to our Deposit Order Account No. 12-0080. For this purpose, a duplicate of this sheet is attached.

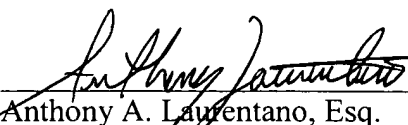
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November 11, 2004

Date

Anthony A. Laurentano, Esq. Registration No. 38,220

Respectfully submitted,  
LAHIVE & COCKFIELD, LLP

  
Anthony A. Laurentano, Esq.  
Registration No. 38,220  
Attorney for Applicants



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Gilbert, John R., *et al.*

Serial No. 10/607,287

Filed: June 25, 2003

For: *MICROFLUIDIC SYSTEM INCLUDING A  
VIRTUAL WALL FLUID INTERFACE PORT FOR  
INTERFACING FLUIDS WITH THE  
MICROFLUIDIC SYSTEM*

Attorney Docket No.: TGZ-001ACP2

Group Art Unit: 1743

Examiner: Not Yet Assigned

MS Amendment  
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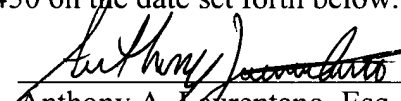
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November 11, 2004

Date of Signature and of Mail Deposit

By:

  
Anthony A. Laurentano, Esq.  
Registration No. 38,220  
Attorney for Applicants

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

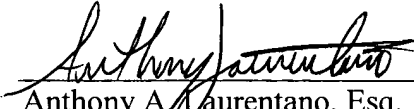
For the Examiner's convenience in reviewing this continuation application, Applicants submit a consolidated PTO Form SB/08, listing all references cited during the prosecution of the parent application. The present application is a Continuation-in-Part of U.S. Serial No. 10/028,852, filed December 21, 2001 (Atty. Docket No. TGZ-001A). All references listed on the enclosed PTO Form SB/08 have been previously cited by or submitted

to the Office in the prior application, and, in accordance with 37 CFR §1.98(d), copies of the references are not enclosed but will be provided upon request.

This statement is not to be interpreted as a representation that the cited publications are material, that an exhaustive search has been conducted, or that no other relevant information exists. Nor shall the citation of any publication herein be construed *per se* as a representation that such publication is prior art. Moreover, Applicants understand that the Examiner will make an independent evaluation of the cited publications.

Under 37 CFR § 1.97(b)(3), no additional costs are believed to be due in connection with the filing of this disclosure. If, however, a first Office Action on the merits issues in this application bearing a mailing date prior to the date of this Information Disclosure Statement, please charge the appropriate fee as required under 37 CFR §1.17(p) to our Deposit Order Account No. 12-0080.

Respectfully submitted,  
LAHIVE & COCKFIELD, LLP

  
Anthony A. Laurentano, Esq.  
Registration No. 38,220  
Attorney for Applicants

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Date: November 11, 2004

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|   |   |    |   | Application Number       | 10/607,287       |
|   |   |    |   | Filing Date              | June 25, 2003    |
|   |   |    |   | First Named Inventor     | Gilbert, John R. |
|   |   |    |   | Art Unit                 | 1743             |
|   |   |    |   | Examiner Name            | Not Yet Assigned |
| Sheet   | 1 | of | 3 | Attorney Docket Number   | TGZ-001ACP2      |

| U.S. PATENT DOCUMENTS |                          |  |                                |  |   |
|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|                       |                          | Number-Kind Code <sup>2</sup> (if known) |                                |  |   |
|                       | A1                       | 5,429,734                                | 07-04-1995                     | Gajar, et al.                                      |   |
|                       | A2                       | 5,529,465                                | 06-25-1996                     | Zengerle, et al.                                   |   |
|                       | A3                       | 5,730,187                                | 03-24-1998                     | Howitz, et al.                                     |   |
|                       | A4                       | 5,757,482                                | 05-26-1998                     | Fuchs, et al.                                      |   |
|                       | A5                       | 5,779,868                                | 07-14-1998                     | Parce, et al.                                      |   |
|                       | A6                       | 5,800,690                                | 09-01-1998                     | Chow, et al.                                       |   |
|                       | A7                       | 5,842,787                                | 12-01-1998                     | Kopf-Sill, et al.                                  |   |
|                       | A8                       | 5,858,195                                | 01-12-1999                     | Ramsey   |   |
|                       | A9                       | 5,858,804                                | 01-12-1999                     | Zanzucchi, et al.                                  |   |
|                       | A10                      | 5,880,071                                | 03-09-1999                     | Parce, et al.                                      |   |
|                       | A11                      | 5,922,591                                | 07-13-1999                     | Anderson, et al.                                   |   |
|                       | A12                      | 5,957,579                                | 09-28-1999                     | Kopf-Sill, et al.                                  |   |
|                       | A13                      | 5,958,202                                | 09-28-1999                     | Reginier, et al.                                   |   |
|                       | A14                      | 5,971,158                                | 10-26-1999                     | Yager, et al.                                      |   |
|                       | A15                      | 6,001,231                                | 12-14-1999                     | Kopf-Sill  |   |
|                       | A16                      | 6,001,229                                | 12-14-1999                     | Ramsey   |   |
|                       | A17                      | 6,010,607                                | 01-04-2000                     | Ramsey   |   |

| FOREIGN PATENT DOCUMENTS |                       |   |                                |   |   |                |
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|                          |                       | Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) |                                |   |   |                |
|                          | A18                   | WO 96/04547 A1  | 02-15-1996                     | Lockheed Martin Energy Sys.                     |   |                |
|                          | A19                   | WO 01/59440 A3  | 08-16-2001                     | Aclara Biosciences Inc.                         |   |                |

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|                                 | A20                      | Haswell, S.J., "Development and Operating Characteristics of Micro Flow Injection Analysis Systems Based on Electroosmotic Flow," Analyst. 1997 Jan; 122:1R-10R.  |                |
|                                 | A21                      | Onnerfjord P, Nilsson J, Wallman L, Laurell T, Marko-Varga G. Picoliter sample preparation in MALDI-TOF MS using a micromachined silicon flow-through dispenser. Anal Chem. 1998 Nov 15;70(22):4755-60.   |                |

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|   |   |    |   | First Named Inventor     | Gilbert, John R. |
|   |   |    |   | Art Unit                 | 1743             |
|   |   |    |   | Examiner Name            | Not Yet Assigned |
| Sheet   | 2 | of | 3 | Attorney Docket Number   | TGZ-001ACP2      |

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|                       | B1                    | 6,010,608                                | 01-04-2000                     | Ramsey   |   |
|                       | B2                    | 6,033,546                                | 03-07-2000                     | Ramsey   |   |
|                       | B3                    | 6,042,709                                | 03-28-2000                     | Parce, et al.                                      |   |
|                       | B4                    | 6,062,261                                | 05-16-2000                     | Jacobson, et al.                                   |   |
|                       | B5                    | 6,068,751                                | 05-30-2000                     | Neukermans   |   |
|                       | B6                    | 6,080,295                                | 06-27-2000                     | Parce, et al.                                      |   |
|                       | B7                    | 6,090,251                                | 07-18-2000                     | Sundberg, et al.                                   |   |
|                       | B8                    | 6,106,685                                | 08-22-2000                     | McBride, et al.                                    |   |
|                       | B9                    | 6,110,343                                | 08-29-2000                     | Ramsey, et al.                                     |   |
|                       | B10                   | 6,120,666                                | 09-19-2000                     | Jacobson, et al.                                   |   |
|                       | B11                   | 6,143,152                                | 11-07-2000                     | Simpson, et al.                                    |   |
|                       | B12                   | 6,130,098                                | 10-10-2000                     | Handique, et al.                                   |   |
|                       | B13                   | 6,150,119                                | 11-21-2000                     | Kopf-Sill, et al.                                  |   |
|                       | B14                   | 6,167,910 B1                             | 01-02-2001                     | Chow   |   |
|                       | B15                   | 6,186,660 B1                             | 02-13-2001                     | Kopf-Sill, et al.                                  |   |
|                       | B16                   | 6,192,768 B1                             | 02-27-2001                     | Wallman, et al.                                    |   |
|                       | B17                   | 6,193,471 B1                             | 02-27-2001                     | Paul   |   |
|                       | B18                   | 6,197,595 B1                             | 03-06-2001                     | Anderson, et al.                                   |   |
|                       | B19                   | 6,213,151 B1                             | 04-10-2001                     | Jacobson, et al.                                   |   |

| FOREIGN PATENT DOCUMENTS |                       |   |                                |  |   |                |
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|                       | C1                       | 6,221,677 B1                             | 04-24-2001                     | Wu, et al.   |   |
|                       | C2                       | 6,221,226 B1                             | 04-24-2001                     | Kopf-Sill  |   |
|                       | C3                       | 6,231,737 B1                             | 05-15-2001                     | Ramsey, et al.                                     |   |
|                       | C4                       | 6,251,343 B1                             | 06-26-2001                     | Dubrow, et al.                                     |   |
|                       | C5                       | 6,271,038 B1                             | 08-07-2001                     | Liu, et al.  |   |
|                       | C6                       | 6,274,089 B1                             | 08-14-2001                     | Chow, et al.                                       |   |
|                       | C7                       | 6,284,113 B1                             | 09-04-2001                     | Bjornson, et al.                                   |   |
|                       | C8                       | 6,290,909 B1                             | 09-18-2001                     | Paul, et al.                                       |   |
|                       | C9                       | 6,416,642 B1                             | 07-09-2002                     | Alajoki, et al.                                    |   |
|                       | C10                      | 6,296,020 B1                             | 10-02-2001                     | McNeely, et al.                                    |   |
|                       | C11                      | 20010051334 A1                           | 12-13-2001                     | Barth, et al.                                      |   |
|                       | C12                      | 6,342,142 B1                             | 01-29-2002                     | Ramsey   |   |
|                       | C13                      | 6,376,181 B2                             | 04-23-2002                     | Ramsey, et al.                                     |   |
|                       | C14                      | 6,399,396 B1                             | 06-04-2002                     | Bass   |   |
|                       | C15                      | 6,409,900 B1                             | 06-25-2002                     | Parce, et al.                                      |   |

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